# PX 138

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|---|---|
| **From:** | Phil Rapoport ▮▮▮@ripple.com> |
| **To:** | Asheesh Birla |
| **CC:** | ▮▮▮ Patrick; ▮▮▮ |
| **Sent:** | 10/15/2013 5:42:10 AM |
| **Subject:** | Re: 4 V's on Ripple giveaways |

You'd typically measure how liquid something is by talking about how wide the market is (i.e. bid/ask spread) and how much volume you can trade at those levels.

Here's an example from the current order book, sorted by tightest market width in percentage terms. This only tells part of the story, because it doesnt describe how much size you can trade at these levels.

| | bid | ask | mid market | width | width(% of mid) |
|---|---|---|---|---|---|
| USDbitstamp/XRP | 131.00 | 131.75 | 131.38 | 0.75 | 0.57% |
| EURbitstamp/USDbitstamp | 1.32 | 1.36 | 1.34 | 0.0358 | 2.68% |
| BTCbitstamp/XRP | 17,928.00 | 18,557.00 | 18,242.50 | 629 | 3.45% |
| BTCbitstamp/USDbitstamp | 129.77 | 138.95 | 134.36 | 9.18 | 6.83% |
| USDsnapswap/XRP | 118.00 | 129.90 | 123.95 | 11.9 | 9.60% |
| EURbitstamp/XRP | 105.00 | 180.00 | 142.50 | 75 | 52.63% |

Adding a 'size' component, here's the market width in current order books if you wanted to trade the equivalent of $500 USD in each cross:

| | bid | ask | mid market | width | width(% of mid) |
|---|---|---|---|---|---|
| EURbitstamp/USDbitstamp | 1.30 | 1.36 | 1.33 | 0.0561 | 4.22% |
| BTCbitstamp/XRP | 17,500.00 | 18,879.00 | 18,189.50 | 1379 | 7.58% |
| USDbitstamp/XRP | 122.11 | 132.50 | 127.31 | 10.39 | 8.16% |
| USDsnapswap/XRP | 107.75 | 149.00 | 128.38 | 41.25 | 32.13% |
| BTCbitstamp/USDbitstamp | 125.50 | 200.00 | 162.75 | 74.5 | 45.78% |
| EURbitstamp/XRP | 32.20 | No Offer | N/A | N/A | N/A |

You'd want to average this data over the trailing 5-days (or some appropriate averaging period).

For some context, here is how tight 'real' financial markets trade:

| | | px_bid | px_ask | px_mid | Width | width(% of mid) |
|---|---|---|---|---|---|---|
| British Pound Spot | GBP Curncy | 1.5936 | 1.5937 | 1.59365 | 1E-04 | 0.006% |
| Euro Spot | EUR Curncy | 1.3493 | 1.3494 | 1.34935 | 1E-04 | 0.007% |
| Mexican Peso Spot | MXN Curncy | 12.999 | 13.0045 | 13.00175 | 0.0055 | 0.042% |
| | | | | | | |
| SPDR S&P 500 ETF TRUST | SPY Equity | 170.93 | 170.95 | 170.94 | 0.02 | 0.012% |
| APPLE INC | AAPL Equity | 496.04 | 496.12 | 496.08 | 0.08 | 0.016% |
| SPDR GOLD SHARES | GLD Equity | 122.83 | 122.85 | 122.84 | 0.02 | 0.016% |
| BAIDU INC - SPON ADR | BIDU Equity | 152.97 | 153.02 | 152.995 | 0.05 | 0.033% |
| GOOGLE INC-CL A | GOOG Equity | 875.74 | 876.08 | 875.91 | 0.34 | 0.039% |

If this isnt clear, just give me a ring!

Phil

On Tue, Oct 15, 2013 at 12:19 AM, Asheesh Birla ████████ @ripple.com> wrote:
Phil is there a good measure of liquidity?  I am guessing it is correlated with velocity but wondering if we want to track it down to certain mini-markets (e.g. XRP -> Euros, XRP -> Pesos)

Asheesh

On Sun, Oct 13, 2013 at 4:44 PM, Phil Rapoport ████ @ripple.com> wrote:
Hi ████████

Generally speaking, I think a successful giveaway will have at least 1 of 2 factors:

1)  The XRP that was given away has high velocity, i.e., it gets traded around between many accounts, presumably getting more users involved in Ripple and also improving network volume metrics.

2)  The receiving account generates a lot of (non spam) entries in the ledger over time.  Even if the giveaway recipient 'hoards' the free XRP and never sells any, it is still a positive outcome if he/she is actively buying more, creating balances in other currencies, trading on the network, etc.

Your definition of the 4 V's was good.  I'd clarify just a little bit:

**Volume** = 1) amount given away;
    2) ensuing trading volume in receiving accounts
The ratio of these would be an interesting metric for us to track.

**Velocity** = rate of turnover of the distributed XRP.  (see: velocity of money)

**Volatility** = annualized standard deviation.

Volatility isn't necessarily a bad thing.  Volatility and trading volumes tend to be very highly correlated.  In financial markets, volatility usually occurs when surprising news is released or when people otherwise rapidly change their opinions.  That usually coincides with high trading volume.  (But of course... protracted and extreme volatility is not a desirable characteristic for a currency.)

**Valuation** = exchange rate of XRP.

I think it would also be interesting to see what currencies XRP is swapped into.  Is everyone selling XRP to receive BTC?  USD?  EUR?   The BTC community is the obvious early adopter.  The more we can encourage fiat balance exchange on Ripple, I think the better for the broad adoption scenario.

An interesting secondary metric might be to look at geographic dispersion of XRP.  All else equal, we'd probably prefer that the XRP get distributed and/or move around to far flung areas, as opposed to staying USA-centric.  Not sure how difficult it is to track IP addresses.

This is going to be super interesting data!  Please keep me in the loop and let me know how I can help or get more involved.

Thanks,
Phil

On Sat, Oct 12, 2013 at 12:24 AM, [redacted] ripple.com> wrote:
Thanks Patrick.

Hi Phil, for background, we are trying to figure out what metrics to use when evaluating the Ripple giveaways' success. Any insight you have on which metrics, and on how to calculate them, would be much appreciated!

On Fri, Oct 11, 2013 at 9:15 PM, Patrick [redacted] @ripple.com> wrote:
Copying Phil (markets) and [redacted] (data).  These are the guys coordinate with.  I think your understanding is on point.  I'm sure Phil may have additional metrics to consider.

> On Oct 11, 2013, at 8:46 PM, [redacted] ipple.com> wrote:
>
> Hey Patrick,
>
> In the giveaway doc you mentioned the 4 V's we need to track for each of the giveaways- volume, velocity, volatility, valuation. I'd like to measure them for the developer conference and github giveaways.
>
> Have you been tracking these, and if so, how can I do it?
>
> Also, I'm not sure I have the right understanding for what each of the four Vs mean:
> Volume = amount we gave away?
> Velocity = rate of exchanges of those who received Ripple (or would we measure velocity of the entire network?)
> Volatility = how much the valuation varies over time
> Valuation = exchange rate of ripple
>
> Thank you!